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10/511,080	10/12/2004	Andreas Ruther	PAT-00356	7054
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Mary E. Golota Cantor Colburn LLP 201 W. Big Beaver Road Suite 1101 Troy, MI 48084			EXAMINER LIGHTFOOT, ELENA TSOY	
			ART UNIT	PAPER NUMBER
			1792	
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

MARJORIE.ELLIS@BASF.COM
Mgolota@CantorColburn.com
usptopatmail@cantorcolburn.com

Office Action Summary

Application No.

10/511,080

Applicant(s)

RUTHER ET AL.

Examiner

Elena Tsoy Lightfoot

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 17 November 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-3,5-12 and 14-25 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-3,5-12 and 14-25 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB-08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

Continued Examination Under 37 CFR 1.114

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on November 17, 2008 has been entered.

Response to Amendment

Amendment filed on October 15, 2008 has been entered. Claims 4 and 13 have been canceled. New claims 24-25 have been added. Claims 1-3, 5-12 and 14-25 are pending in the application.

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claim 5 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention because claim 5 depends on cancelled claim 4. For examining purposes claim 5 was interpreted as depending on claim 1.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1, 2, 5-12 and 14-23 are rejected under 35 U.S.C. 103(a) as being unpatentable over and Mayer (US 5,633,037) and Applicants' admitted state of art, further in view of Hartung et al (US 5,368,944), and further in view of Duda et al (US 6495201).

The Examiner Note: US 5,633,037 is of the same patent family as EP 0 521 040 B2 that is described in the Applicants' specification at P1.

Mayer discloses a process for producing a multicoat refinish system comprising applying a clear (pigment-free) aqueous coating material (See column 14, lines 48-49, 59-60) in the region of the defect in the OEM finish, followed by an aqueous refinish basecoat material containing metallic pigment and a transparent top coat composition, and simultaneously drying all three layers at temperature up to 140°C (See column 1, lines 5-31). The aqueous or water-thinnable coating materials used in the process according to the invention (i.e. for each of three coating layers) contain at least one water-thinnable or water-dispersible binder, preferably in amounts from 5 to 50% by weight, particularly preferably in amounts from 10 to 30%, in each case based on the total weight of the coating material (See column 4, lines 36-41). These binders can be **polyurethane** resins (See column 4, lines 41-42) that can be modified by functional groups which are suitable for crosslinking of the resins using curing agents (See column 4, lines 43-46). In other words, the first clear coating material is a *pigment-free extract* of the aqueous refinish basecoat material. The aqueous coating materials may contain 5 to 20% by weight, based on the total solids content of the coating material, of a water-thinnable **amino resin, preferably melamine resin**, and 5 to 20% by weight of a water-thinnable polyether (for example

polypropylene glycol having a number average molecular weight of 400 to 900) (See column 14, lines 11-16). A clearcoat material is then applied wet on wet to the aqueous basecoat film, after which the films present are cured together (See column 1, lines 21-31). The Examiner takes official notice that it is a common knowledge in the art that wet on wet technique involves flashing off each coat before applying a subsequent coat. The coating material is applied by e.g. a **spray gun** (See column 4, lines 15-16) in the region of the area of damage with a dry film thickness of 2 to 50 μ (See column 3, lines 21-23) using the tapering-off technique (See column 4, lines 1-15). Mayer teaches that the repair of metallic paints is particularly difficult, since the shade and brightness of the special effect are highly dependent on the method of working; the width of the spray gun nozzle and the spraying pressure, inter alia, play a crucial role (See column 1, lines 32-42) as well as the method of thinning and the spray viscosity likewise influence shade and special effect (See column 1, lines 42-43). The region of the adjacent original finish which is coated with the coating material using the tapering-off technique depends on many factors, for example the spray gun, the spraying pressure, the nature, size and position of the area of damage and similar (See column 4, lines 15-24). It is known in the repair art that in the case of metallic multicoat finishes the repair area and the adjacent parts are resprayed with a conventional, i.e. solvent-borne, highly thinned clearcoat after the preparative work described above, such as cleaning, sanding, surfacing, etc. (See column 1, lines 49-61); after the clearcoat coating produced in this way has been *surface-dried* at room temperature or a slightly elevated temperature, the area of damage is resprayed with special-effect paints, such as metallic basecoats, in such a way that the paint hides the area of damage and tapers off into the adjacent areas, i.e. from the edge of the area of damage outwards the film thickness gradually diminishes

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to 0 μ (See column 1, lines 62-67). In the case of difficult colors, the edge zone can be resprayed using **lower spray pressure** using *low*-solid conventional special-effect paints (See column 2, lines 1-5) and water-thinnable base materials (See column 3, lines 52-62).

If it could be argued that as metallic basecoats are sprayed over the first clear coat at lower pressure than the first clear layer, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have applied a basecoat at less pressure than the first layer with the expectation of providing the desired tapered optimum coverage of original finish.

Note that Applicants admitted that Mayer (EP 0521040 B2) disclosed all limitations of claimed invention (See P5 of the Applicants' specification) except that the known refinish process was unable to solve the existing problems since the refinish in the conventional sense, which of course is carried out above all in vehicle finishing workshops compared to overcoating on the line at the automaker's plant, since said overcoating requires quite different amounts of coating materials and an entirely different logistical system. However, Claim 1 does not recite logistical system. Therefore, Mayer reads on claim 1.

Mayer fails to teach that the same basecoat is used in original finish and in the repair finish.

Hartung et al teaches that the term *refinishing* is understood to mean the **repair** of *original* finishes using a **fresh coating of basecoat** and clearcoat and joint baking of the overcoated basecoat and clearcoat. Refinishing can be effected **shortly** after the original finishing on the production line as well as after the automobile has been built (See column 5, lines 62-67). By using nonionically and/or ionically stabilized polyurethane resin containing (See column 2, lines 61-63) aqueous metallic basecoats (See column 5, lines 5-8) and water-thinnable melamine-

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formaldehyde resin (claimed amino resin crosslinking agent) (See column 7, lines 40-41) it is possible to produce refinishes which possess improved adhesion especially to original finishes which have not been pretreated, for example, by sanding. (See column 1, lines 37-43; column 6, lines 4-7). The improved adhesion between the clearcoat and basecoat films is particularly apparent when 2-component clearcoats based on hydroxyl- and carboxyl-containing polyacrylate resins and polyisocyanates are used (See column 6, lines 13).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have used the same base coat and clear coat layers for producing original finish and repair refinish in Mayer shortly after the original finishing on the production line as well as after the automobile has been built, with the expectation of providing the desired improved adhesion to original finishes, as taught by Hartung et al.

Mayer fails to teach that a spray gun is *pneumatic* spray gun.

Duda et al teaches that the application of water-based base coat compositions may be carried out with *conventional* application devices, i.e., with spray guns and corresponding nozzle and *air* cap equipment which may be conventionally used for vehicle *repair* coating such as normal *pneumatic* high performance spray guns (See column 3, lines 42-51) with output pressure in the case of conventional high-pressure guns, for example, 2.0 to 4.5 bar (See column 4, lines 4-10).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have used normal *pneumatic* high performance spray guns with output pressure within 2.0 to 4.5 bar as spray guns in Mayer since Duda et al teaches that normal *pneumatic* high performance spray guns are *conventional* application devices conventionally used for

vehicle *repair* coating for the application of water-based base coat compositions, and since Mayer does not limit its teaching to particular spray guns.

As to claims 5, 16, as was discussed above, Mayer teaches that spraying pressure is a result-effective parameter in a refinish process.

It is held that it is not inventive to discover the optimum or workable ranges of result-effective variables by routine experimentation. In re Antonie, 559 F.2d 618, 195 USPQ 6 (CCPA 1977). See also In re Boesch, 617 F.2d 272, 205 USPQ 215 (CCPA 1980).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have determined the optimum values of the relevant spraying pressure parameters (including those of claimed invention) in Mayer through routine experimentation depending on particular application in the absence of showing of criticality.

As to claim 15, The Examiner takes official notice that it is a common knowledge in the coating art to use low humidity or air flow to accelerate drying the applied coating

As to claim 9-10, The aqueous or water-thinnable coating materials contain at least one water-thinnable or water-dispersible binder, preferably in amounts from 5 to 50% by weight, particularly preferably in amounts from 10 to 30%, in each case based on the total weight of the coating material. These binders can be chosen, for example, from the group of acrylate, polyurethane and/or polyester resins. If appropriate, they can be modified by functional groups which control the properties of the resins in a particular direction and/or are suitable for crosslinking of the resins using *curing agents*. The curing agents can be added to the aqueous or water-thinnable coating material under discussion, but they can also be contained in the basecoat and/or in the final clearcoat coating. See column 4, lines 36-65. **Polyurethanes** are generally

incompatible with water, unless special constituents are incorporated in their synthesis and/or special preparative steps are taken. Thus an acid value is incorporated which is high enough for the neutralized product to be dispersible in water to yield a stable dispersion binder (i.e. ionically \ stabilized) (See column 7, lines 1-6).

As to claims 17-20, after drying of the basecoat at temperatures preferably at temperatures below 80.degree. C., for a period of 5 to 60 min., a suitable transparent topcoat composition is applied to the basecoat and--should the whole of the first coat not be provided with a basecoat--to the possibly still uncoated parts of the first coat. The topcoat composition is preferably applied so as to taper off into the uncoated region of the original finish or to the whole of the adjacent original finish up to an edge, decorative trim or similar in such a way that the original finish is hidden, since in this way time-consuming polishing work is eliminated. The dry film thickness of the topcoat is generally between 30 and 100 .mu.m. **1- or 2-component** clearcoats, both organic solvent-borne and aqueous, are suitable as the topcoat composition. **Clearcoats based on a hydroxyl-containing acrylate copolymer and a blocked polyisocyanate** are frequently used. Such clearcoats are disclosed, for example, in the patent applications DE 3,412,534, DE 3,609,519, DE 3,731,652 and DE 3,823,005. After a **flash-off** time of about 5 minutes, if necessary, the topcoat, where appropriate together with the basecoat and where appropriate together with the coating obtained in stage (2) is dried at temperatures between room temperature and 140.degree. C., preferably at temperatures below 80.degree. C., for a period of 5 to 120 min the clear coat is flashed-off for about 5 minutes. See column 16, lines 40-67.

As to claim 23, in examples of Mayer, a multicoat original finish, such as is **customary in automotive production line painting**, is used as the substrate. It is unimportant whether the finishes are conventionally based or based on water-thinnable systems. The area of damage is simulated as in automotive production line painting. See column 17, lines 4-41.

5. Claims 3, 24 and 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mayer and Applicants' admitted state of art, further in view of Hartung et al, and further in view of Duda et al, as applied above, and further in view of Sakamoto et al (US 6,168,864).

The cited prior art fails to teach that the OEM finish comprising aqueous basecoat and liquid clear coat is produced by an *electrostatic* spray application.

Sakamoto et al teaches that a multilayer automotive coating film comprising aqueous basecoat (See column 7, lines 1-5) and a liquid clear coat (See column 7, lines 13-14) may be produced by *electrostatically* spraying the liquid clear coat over spray coated the basecoat (See column 12, lines 13-21). The spray coating of the basecoat can be performed using an air spray coater, airless spray coater, air atomizing or rotary atomizing **electrostatic** coater (See column 8, lines 25-28).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have produced a multilayer automotive coating in the cited prior art using electrostatic spraying since Sakamoto et al teaches that a multilayer automotive coating film comprising aqueous basecoat and a liquid clear coat may be produced by *electrostatically* spraying.

As to lower solids concentration in clear coat than in basecoat, Mayer teaches that as described in Chapter 7 "Automotive Refinishing" of the Glasurit Handbook, in the case of

metallic multicoat finishes the repair area and the adjacent parts are resprayed for this purpose with a conventional, i.e. solvent-borne, **highly thinned** clearcoat after the preparative work described above, such as cleaning, sanding, surfacing, etc. It is important that this clearcoat is also sprayed on to the repair area, i.e. the body filler patches. Customary conventional clearcoats, for example 2-component clearcoats based on hydroxyl-containing acrylate copolymers as binders and isocyanates as crosslinking agents, are used as the clearcoat for this purpose. (See column 1, lines 49-61). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have used **highly thinned** aqueous clearcoat in Mayer to apply to the repair area.

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

(US 5629372) to Anton et al is cited here to show that teaches that a liquid clear coating composition (See column 2, lines 25-26) is applied over spray coated pigmented base coat (See column 7, lines 54-56) containing solid color pigments or metallic flake pigments or mixtures thereof (See column 2, lines 11-14) that is formed by removing water from a water based basecoat composition usually by *conventional* means such as spraying or electrostatic spraying (See column 5, line 61 to column 6, line 2).

Response to Arguments

Applicant's arguments with respect to claims 1-3, 5-12 and 14-25 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Elena Tsoy Lightfoot whose telephone number is 571-272-1429. The examiner can normally be reached on Monday-Friday, 9:00AM - 5:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Timothy Meeks can be reached on 571-272-1423. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Elena Tsoy Lightfoot, Ph.D.
Primary Examiner
Art Unit 1792

January 2, 2009

/Elena Tsoy Lightfoot/